

REMARKS

Applicants respectfully requests reconsideration of this application as amended. Claims 1-19 are pending in the application. Claims 1-19 are rejected. Claims 1, 11, 16 and 19 are amended to correct informalities rather than to distinguish from prior art.

A corrected IDS is submitted herewith to correct the typographical error in Citation 1 of the IDS submitted July 16, 2004.

Rejections under 35 USC § 112

The Office Action mailed March 9, 2006 rejects Claims 6-10, 12-15 and 17-19 under 35 USC § 112, second paragraph for allegedly being indefinite.

With regard to Claim 6, the Examiner states that the term "implication structure" is not supported by the specification. Applicant respectfully disagrees.

On the contrary, the present specification discloses (e.g. on p. 16, lines 12-23, Fig. 5a; emphasis added) that:

For one embodiment of a dynamic transition relation pruning technique, a method is disclosed that improves the efficiency for symbolic model checking computations by pruning transition relations under assumptions dynamically generated from the properties being evaluated, thereby providing means to handle very large scale integrated circuits and other finite state systems of problematic complexity for prior methods.

Figure 5a illustrates a parsing of a property 510, $a \Rightarrow (b \Rightarrow X(Xf))$. At the first stage the property is parsed into a root 500 representing the logical implication operation, a left sub-property 506 representing the variable, a, and a right sub-property 511 representing $b \Rightarrow X(Xf)$.

Similarly, the Examiner states that the terms "structure of the first property" set forth in Claim 12 and "logical structure of the first property" set forth in Claim 17 are not supported by the specification. Applicant respectfully submits that a claim term must be construed through the eyes of a person of ordinary skill that has read and understood the specification.

The Federal Circuit explained in *MultiForm Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998):

It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed. Such person is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field. The inventor's words that are used to describe the invention--the inventor's lexicography--must be understood and interpreted by the court as they would be understood and interpreted by a person in that field [**25] of technology. Thus the court starts the decision making process by reviewing the same resources as would that person, viz., the patent specification and the prosecution history.

Accordingly, Applicant respectfully submits that to a person of skill in the field, having read the specification (in particular Figures 5a-5c, 6a-6d and 7a-7b and p. 16 line 9 through p. 24, line 2) the terms "implication structure" set forth in Claim 6, "structure of the first property" set forth in Claim 12 and "logical structure of the first property" set forth in Claim 17, would apprise one of the claim's respective scope with a sufficient degree of particularity and clarity.

Therefore, Applicant respectfully request the Examiner withdraw the rejection of Claims 6-10, 12-15 and 17-19 under 35 USC § 112, second paragraph.

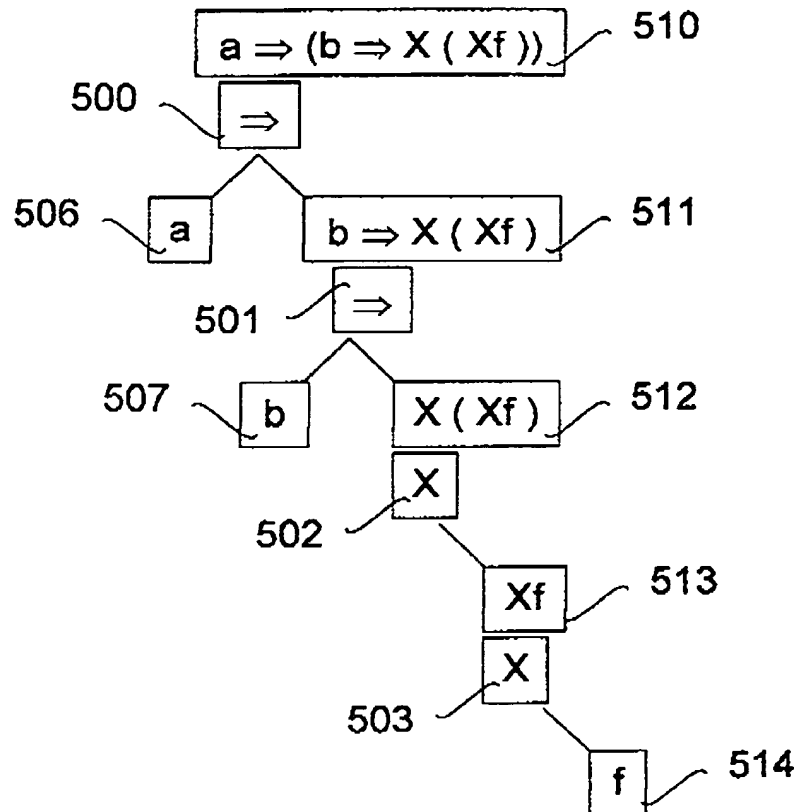
Similarly, the Office Action rejects Claims 6-10, 12-15 and 17-19 under 35 USC § 112, first paragraph for allegedly not being enabled. The Examiner states that the terms "implication structure" set forth in Claim 6, "structure of the first property" set forth in Claim 12 and "logical structure of the first property" set forth in Claim 17, are not supported by the specification. Again, Applicant respectfully disagrees.

For example, the present specification further discloses (e.g. on p. 17, lines 1-8, Fig. 5a; emphasis added) that:

At the second stage the sub-property 511 is parsed into a root 501 representing the logical implication operation, a left sub-property 507 representing the variable, b, and a right sub-property 512 representing X(Xf). At the third stage the property is parsed into a root 502 representing the next state operator X, and a right sub-property 513 representing Xf. Finally at the fourth stage the sub-property 513 is parsed into a root 503 representing the next state operator X, and a right sub-

property 514 representing f . Given a parsing of the property assumptions may be generated for the sup-properties to be evaluated.

The present specification also illustrates an example structure in Fig. 5a as:



The present specification further discloses (p. 17, line 20 through p. 18, line 4;

Fig. 5b; emphasis added) that:

In processing block 524 the assumption for iteration i , Assum_i, is set to the assumption for iteration $i-1$. Assum_{i-1}, combined with the left sub-property of Node using the logical AND operation. In processing block 525 the assumption for iteration i , Assum_i, is set to post-image of the assumption for iteration $i-1$, Assum_{i-1}. Processing then proceeds to processing block 526 from processing block 524 or from processing block 525, where Node is set to the right sub-property of Node. The iteration counter i is then incremented and processing proceeds to processing block 522.

the present specification further discloses (p. 18, lines 5-17, Fig. 5c; emphasis added) that:

Figure 5c shows an example of producing and propagating assumptions from sub-properties to be evaluated. . In iteration zero, assumption 540 is set to the value one and sub-property 530 is set to the state predicate for property to be evaluated ($a \Rightarrow (b \Rightarrow X(Xf))$). In iteration one, assumption 541 is set to $a = (1 \text{ AND } a)$ in accordance with processing block 524 and sub-property 531 is set to the right sub-property of sub-property 530, $b \Rightarrow X(Xf)$ in accordance with processing block 526. In iteration two, assumption 542 is set to $a \text{ AND } b$ and sub-property 532 is set to the right sub-property of sub-property 531, $X(Xf)$. In iteration three, assumption 543 is set to $\text{Post}(a \text{ AND } b)$, which may be evaluated as d since $N(d) = b$, and sub-property 533 is set to the right sub-property of sub-property 532, Xf . In iteration four, assumption 544 is set to $\text{Post}(\text{Post}(a \text{ AND } b))$ which may be evaluated to one (true) and sub-property 534 is set to the right sub-property of sub-property 533, f .

Accordingly, Applicant respectfully submits that a person of skill in the field, having read and understood the specification is enabled to generate the first assumption "from an implication structure of the first property" as set forth in Claim 6, to produce the first assumption "from the structure of the first property" as set forth in Claim 12 and to produce the first assumption "from the logical structure of the first property" as set forth in Claim 17 without undue experimentation.

Therefore, Applicant respectfully request the Examiner withdraw the rejection of Claims 6-10, 12-15 and 17-19 under 35 USC § 112, first paragraph.

Rejections under 35 USC § 102 (b)

The Office Action rejects Claims 1-5, 11 and 16 under 35 USC § 102 (b) as allegedly being anticipated by M. Chiodo et al., "Automatic Compositional Minimization in CTL Model Checking," Nov. 1992, pp. 172-178 (Chiodo).

The Examiner indicates that the claimed subject matter of generating or producing a first assumption from a first property as set forth in Claims 1, 11, and 16 is anticipated by the disclosure of (p.172, 1 Introduction, paragraph 1) (actually paragraph 2) deducing properties by reasoning of the individual components and their interactions.

Applicant respectfully submits that the Examiner has failed to make a prima face case of anticipation. Appellant submits that in order for a rejection based on anticipation

to be made, the identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The cited location of Chiodo is referring to "compositional verification." He gives some examples in paragraph 3. Applicant respectfully submits that one of skill in the field, having read and understood the specification and the disclosure of Chiodo would understand that these are two fundamentally different things.

It was explained recently in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313; 75 U.S.P.Q.2D (BNA) 1321 (Fed. Cir. 2005): Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.

See also *Medtrud, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005) ("We cannot look at the ordinary meaning of the term . . . in a vacuum. Rather, we must look at the ordinary meaning in the context of the written description and the prosecution history."); *V-Formation, Inc. v. Benetton Group SpA*, 401 F.3d 1307, 1310 (Fed. Cir. 2005) (intrinsic record "usually provides the technological and temporal context to enable the court to ascertain the meaning of the claim to one of ordinary skill in the art at the time of the invention"); *Unitherm Food Sys., Inc. v. Swift-Eckrich, Inc.*, 375 F.3d 1341, 1351."

See also *Research Plastics, Inc. v. Fed. Packaging Corp.*, 421 F.3d 1290, 1295 (Fed. Cir. 2005) ("Claim construction begins with the language of the claims. *Vitronics Corp. v. Conceptronic Inc.*, 90 F.ed 1576, 1582 (Fed. Cir. 1996). The words of a claim are generally to be accorded their "ordinary and customary meaning," *id.* at 1582, which is "the meaning that term would have to a person of ordinary skill in the art in question at the time of invention,") also citing *Phillips*, 2005 U.S. App. LEXIS 13954, at *22 ("It is presumed that the person of ordinary skill in the art read the claim in the context of the

entire patent, including the specification, not confining his understanding to the claim at issue.”).

Moreover, the “compositional verification,” technique Chiodo discusses in the citation relied upon by the Examiner is not even the technique he uses in combination with other methods disclosed in the rest of his paper. Chiodo states that his approach falls into the other category of “compositional minimization” (p. 173, col. 1, lines 4-6.” Therefore, we would need some suggestion to combine these two techniques.

Applicant respectfully submits that Chiodo does not disclose generating or producing a first assumption from a first property as set forth in Claims 1, 11, and 16.

Accordingly, Applicant believes that Claims 1-5, 11 and 16 are presently in condition for allowance and such action is earnestly solicited.

CONCLUSION

Applicant respectfully submits the present claims for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Lawrence Mennemeier at (408) 765-2194.

Authorization is hereby given to charge our Deposit Account No. 022666 for any charges that may be due.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

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